

REMARKS

Reconsideration of this application is respectfully requested.

I. Status of the Claims

Claims 1-24 are pending in the application.

Claims 15-24 have been added and contain no new matter. Support for the added claims can be found, for example, in the Embodiments of the Specification and Claims 6 and 13.

Claims 1 and 8 have been amended. Support for the amendment can be found in the Specification, for example, on page 16, line 7 to page 17, line 6. No new matter has been added.

II. Rejection Under 35 U.S.C. § 112

Claims 1-14 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite. The Examiner states that claim 1 and 8 are indefinite in the phrase “belt-type photosensitive body” because it is not clear what is the scope of the term “belt-type.”

Applicants respectfully traverse the Examiner’s rejection. The Specification clearly defines the term “belt-type.” On page 3, line 11 of the Specification, “belt-type” is defined as “endless flexible.” The test for definiteness under §112, second paragraph, is whether “those skilled in the art would understand what is claimed when the claim is read in light of the specification.” *Orthokinetics, Inc. v. Safety Travel Chairs, Inc.*, 806 F.2d 1565, 1576 (Fed. Cir. 1986). One of ordinary skill in the art would understand what the term “belt-type” means as defined by the Specification.

In view of the foregoing, Applicants respectfully request Examiner withdraw the above rejection to claims 1-14.

III. Rejections under 35 U.S.C. § 103

Claims 1-4 and 8-11 have been rejected under 35 U.S.C. § 103(a) as being unpatentable for obviousness over U.S Patent No. 5,629,117 to Katsukawa (“Katsukawa”) in view of Diamond, Handbook of Imaging Materials, pages 395-396 (“Diamond”) and U.S. Patent No. 5,737,669 to Ring (“Ring”). The Examiner states that Katsukawa discloses a positively charged single-layer photosensitive member comprising a conductive support and a photosensitive layer of titanyl phthalocyanine, an electron transport material, a hole transport material, and polycarbonate Z resin. However, the Examiner admits that Katsukawa does not disclose the use of an endless conductive flexible substrate as recited in the instant claims. The Examiner relies on Diamond’s disclosure of an image loops and Ring’s disclosure of the disadvantages of an image-carrying drum for the teaching of an endless conductive flexible substrate.

Applicants respectfully traverse the rejection and submit that the claims as now amended recite over the art of record. Claims 1 and 8 now recite specific crystal types of titanyl phthalocyanine. (See, Specification, page 16, line 7, through page 17, line 6; and Embodiments 1, 9 and 17). As discussed in the Specification and exemplified in the Embodiments, the use of titanyl phthalocyanine compounds with the specific X-ray diffraction properties as the charge generating agent provides substantial benefits. (See, Specification page 12, lines 13-20; page 17 line 9; and page 65 lines 21-24).

The specific titanyl phthalocyanine compounds are useful in solving problems in the endless flexible single-layer positively charged photosensitive body. Problems solved by the use of the specifically claimed titanyl phthalocyanine are specific to the belt-type photosensitive body which uses a single-layer positively charged photosensitive layer. The problems include lack of strength and inability to withstand the specific tension and compression force applied to the belt-type

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photosensitive body. (*See, Specification pages 6-7, 9-10*). Katsukawa, Diamond and Ring fail to teach or suggest the use of specific titanyl phthalocyanine compounds to solve the above problems.

Another problem solved by the use of the specific titanyl phthalocyanine compounds is that with a single-layer positively charged photosensitive body, the charge generating region resulting from light exposure is concentrated near the photosensitive layer surface, as compared to a laminated negatively charged photosensitive body. When used in the belt-type photosensitive body, with mechanical damage generated at the layer surface by the external tension and compression forces, the concentration of the charge generating region near the photosensitive layer surface causes a large loss in the photosensitive body properties. Further, the addition of the specific titanyl phthalocyanine increases the sensitivity of the photosensitive body. (*See, Specification pages 7-8*). Katsukawa, Diamond and Ring fail to teach or suggest the use of specific titanyl phthalocyanine compounds to solve the problem of the concentration of the charge generating region near the photosensitive layer surface. .

Katsukawa, Diamond and Ring fail to teach the use of the titanyl phthalocyanine compound with the specific X-ray diffraction properties of the present invention and the corresponding benefits. Katsukawa, Diamond, and Ring thus do not teach or suggest to one of ordinary skill in the art to use the specific titanyl phthalocyanine compounds of the present invention.

Applicants respectfully submit that claims 1 and 8 are allowable over Katsukawa in view of Diamond and Ring for the reasons above. Additionally, the Applicants respectfully traverse the rejection of claims 2-4 and 9-11 by stating that these claims define over the prior art based on their own recital and dependency from the independent claims. Therefore, Applicants respectfully request the Examiner withdraw the rejection

Claims 1, 5, 7, 8, 12 and 14 have been rejected under 35 U.S.C. § 103(a) as being unpatentable for obviousness over U.S Patent No. 5,629,117 to Yu (“Yu”) in view of European Patent 574,154 (“EP ‘154”). The Examiner states that Yu discloses an electrophotographic copying apparatus comprising an endless flexible electrophotographic photoreceptor belt stretched over a plurality of cylindrical rollers and a charging station, an image exposure station, an image development station, and a cleaning station. The Examiner states that Yu further discloses the use of generally small diameter support rollers. The Examiner admits that Yu does not disclose an endless flexible photoreceptor belt comprising a single photosensitive layer of the present invention. However, the Examiner relies on EP ‘154 for disclosing the single photosensitive layer including an electron transport material, titanyl phthalocyanine, a hole transport material, and polycarbonate resin. Though the Examiner admits that EP ‘154 does not disclose the use of an endless flexible substrate of the present invention, EP ‘154 discloses that various conductive materials can be used, that may be a plastic material vapor deposited on or laminated with a metal.

Applicants respectfully traverse the Examiner’s rejection and submit that the amended claims recite over Yu and EP ‘154. As discussed above, the claims now recite a specific crystal structure of the titanyl phthalocyanine compound, whose use is beneficial to the present invention. Yu and EP ‘154 fail to teach the use of the titanyl phthalocyanine compound with the specific X-ray diffraction properties of the present invention and the corresponding benefits. Yu and EP ‘154 thus do not teach or suggest to one of ordinary skill in the art to use the specific titanyl phthalocyanine compounds of the present invention.

Applicants respectfully submit that claims 1 and 8 are allowable over Yu in view of EP ‘154 for the reasons above. Additionally, the Applicants respectfully traverse the rejection of claims 5, 7, 12 and 14 by stating that these claims define over the prior art based on their own recital and

dependency from the independent claims. Therefore, Applicants respectfully request the Examiner withdraw the rejection.

CONCLUSION

Applicants respectfully request entry and allowance of new claims 15-24. In view of the foregoing, it is believed that claims 1-14 are in condition for allowance and is respectfully requested that the application be reconsidered and that all pending claims be allowed.

If there are any other issues remaining which the Examiner believes could be resolved through either a Supplemental Response or an Examiner's Amendment, the Examiner is respectfully requested to contact the undersigned at the telephone number indicated below.

Respectfully submitted,



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